

HB 2077, HD2

RE: RELATING TO HYDRO-
ELECTRIC POWER

TESTIMONY

DAVID Y. IGE
Governor

SHAN S. TSUTSUI
Lt. Governor



SCOTT E. ENRIGHT
Chairperson, Board of Agriculture

PHYLLIS SHIMABUKURO-GEISER
Deputy to the Chairperson

State of Hawaii
DEPARTMENT OF AGRICULTURE
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TESTIMONY OF SCOTT E. ENRIGHT
CHAIRPERSON, BOARD OF AGRICULTURE

BEFORE THE SENATE COMMITTEES ON TRANSPORTATION AND ENERGY
AND WATER, LAND, AND AGRICULTURE

March 22, 2016
2:50 P.M.
CONFERENCE ROOM 229

HOUSE BILL NO. 2077 HD2
RELATING TO HYDROELECTRIC POWER

Chairpersons Inouye and Gabbard and Members of the Committees:

Thank you for the opportunity to testify on House Bill No. 2077 HD2 that allows a "small hydropower facility" as defined by the U. S. Department of Energy as a hydroelectric facility on all Agricultural District lands. The Department of Agriculture supports the intent of this measure that appears to establish a requirement that the energy generated (page 4, lines 3-10) be sold only to bona fide agricultural activities on non-contiguous sites (page 20, lines 5-7).

Thank you for the opportunity to submit our testimony.



DAVID Y. IGE
Governor

SHAN S. TSUTSUI
Lt. Governor



JAMES J. NAKATANI
Executive Director

STATE OF HAWAII
AGRIBUSINESS DEVELOPMENT CORPORATION
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TESTIMONY OF JAMES J. NAKATANI
EXECUTIVE DIRECTOR
AGRIBUSINESS DEVELOPMENT CORPORATION

BEFORE THE COMMITTEE ON TRANSPORTATION AND ENERGY
AND
COMMITTEE ON WATER, LAND, AND AGRICULTURE

Tuesday, March 22, 2016
2:50 p.m.

HOUSE BILL NO. 2077 H.D. 2
RELATING TO HYDROELECTRIC POWER

Chairpersons Inouye and Gabbard and Members of the joint Committees:

My name is James Nakatani, Executive Director of the Agribusiness Development Corporation ("ADC"). The ADC strongly supports House Bill No. 2077 H.D. 2 which permits hydroelectric facilities on Agricultural District lands that are considered small hydropower facilities under federal law.

The ADC is intrigued by hydroelectricity and would explore the idea of producing a clean source of energy to help its farmers become more self-sufficient and protect their bottom line while creating more efficiency in their water usage. The elevation changes of the ditch systems and water lines around the State make conditions ideal for generating hydropower, which can be created 24/7 indefinitely assuming that the reservoir it is utilizing never runs dry. More importantly, because hydroelectricity uses "non-consumptive water", all of the

water used to generate the hydropower is returned to the reservoir or original source.

In addition to the environmental benefits, permitting hydropower facilities on agricultural district lands can help generate the necessary funding to modernize entire water systems which can benefit all of its users and help agriculture thrive.

Thank you for the opportunity to testify.

DAVID Y. IGE
GOVERNOR OF HAWAII



**STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES**

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**Testimony of
SUZANNE D. CASE
Chairperson**

**Before the Senate Committees on
TRANSPORTATION AND ENERGY
and
WATER, LAND, AND AGRICULTURE**

**Tuesday, March 22, 2016
2:50 PM**

State Capitol, Conference Room 229

**In consideration of
HOUSE BILL 2077, HOUSE DRAFT 2
RELATING TO HYDROELECTRIC POWER**

House Bill 2077, House Draft 2 proposes to authorize construction of small hydroelectric facilities as defined by the United States Department of Energy in a manner that combines clean energy infrastructure and irrigation for agricultural lands. **The Department of Land and Natural Resources (Department) supports hydroelectric facilities, including pumped storage, and offers an additional amendment to the bill in order to streamline the approvals process while still ensuring protection of public trust resources and uses.**

In its current form, House Bill 2077, House Draft 2 may place undue burdens on current agricultural operations which are already legally allowed to divert water for agricultural purposes. As drafted, the addition of a hydroelectric facility to an existing irrigation system, without increasing the amount of surface water diverted, would require an amendment to existing instream flow standards. In this case, the addition of a hydroelectric facility is adding value to an existing agricultural operation without increasing the impact to instream uses, making the requirement for a new instream flow standard burdensome and unnecessary.

To address this issue, the Department proposes an additional amendment (double underscored below) at Line 14 of SECTION 3(a)(23)(C):

- (C) Shall, if over five hundred kilowatts in hydroelectric generating capacity, have the approval of the commission on water resource management, including a new

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

KEKOA KALUHIWA
FIRST DEPUTY

JEFFREY T. PEARSON, P.E.
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

instream flow standard established for the hydroelectric facility in question where the project involves new or expanded diversions; and

The construction of any new stream diversion works structures would already require an amendment to the interim instream flow standards established under these rules. Conversely, if a hydroelectric facility were added onto an existing surface water system (i.e., irrigation ditch), without modification to the existing stream diversion works structure or diversion of additional amounts of water, no amendment to the interim instream flow standard would be required.

The Department recognizes the importance and benefit of hydroelectric energy-generating facilities towards energy independence and security and respectfully requests your consideration of our proposed amendment.



**TESTIMONY OF
THE DEPARTMENT OF THE ATTORNEY GENERAL
TWENTY-EIGHTH LEGISLATURE, 2016**

ON THE FOLLOWING MEASURE:

H.B. NO. 2077, H.D. 2, RELATING TO HYDROELECTRIC POWER.

BEFORE THE:

SENATE COMMITTEES ON TRANSPORTATION AND ENERGY, AND ON WATER,
LAND, AND AGRICULTURE

DATE: Tuesday, March 22, 2016

TIME: 2:50 p.m.

LOCATION: State Capitol, Room 229

TESTIFIER(S): Douglas S. Chin, Attorney General, or
Bryan C. Yee, Deputy Attorney General

Chairs Inouye and Gabbard and Members of the Committees:

The Department of the Attorney General provides the following technical comments.

This bill proposes to remove the requirement that hydroelectric facilities on agricultural lands be accessory to agricultural activities.

Currently, section 205-2(d)(7), Hawaii Revised Statutes (HRS), allows accessory agricultural uses, including hydroelectric facilities that are accessory to agricultural activities. Section 205-4.5(a)(23), HRS, sets forth additional limitations on hydroelectric facilities on A and B-rated agricultural lands, beyond the requirement that the hydroelectric facility be accessory to an agricultural activity.

In order to achieve the bill's purpose, we recommend adding a new paragraph rather than amending an existing paragraph. More specifically, we recommend removing the phrase "hydroelectric facilities in accordance with section 205-4.5(a)(23)" from page 3, line 21, through page 4, line 1, and adding a new paragraph (16) to section 205-2(d), HRS, to provide as follows:

"Hydroelectric facilities as described in section 205-4.5(a)(23)." In addition, we also recommend that the amendments on page 4, line 3 to line 10, should be deleted.

This will accomplish the bill's purpose in allowing any hydroelectric facility allowed on A and B-rated lands pursuant to section 205-4.5(a)(23), HRS, to be a permitted use on all other agricultural lands. We recommend adding a new paragraph (16) rather than amending paragraph (7) because paragraph (7) describes types of accessory uses. Hydroelectric facilities through this bill are specifically intended to be allowed even though they are not accessory uses. A new paragraph rather than an amendment to section 205-2(d)(7), therefore, is more appropriate.

Thank you for this opportunity to provide testimony.



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March 22, 2016

HEARING BEFORE THE
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY
SENATE COMMITTEE ON WATER, LAND, AND AGRICULTURE

TESTIMONY ON HB 2077, HD2
RELATING TO HYDROELECTRIC POWER

Room 229
2:50 PM

Aloha Chair Inouye, Chair Gabbard, Vice Chair Nishihara, and Members of the Committees:

I am Randy Cabral, President of the Hawaii Farm Bureau Federation (HFB). Organized since 1948, the HFBF is comprised of 1,900 farm family members statewide, and serves as Hawaii's voice of agriculture to protect, advocate and advance the social, economic and educational interests of our diverse agricultural community.

HFB supports the intent of HB 2077, HD2, which permits hydroelectric facilities on Agricultural District lands that are considered small hydropower facilities under federal law.

Renewable energy is important to the State's energy goals. Hydroelectric facilities can serve as a feasible alternative energy source to meet such goals. That being said, viable farming and ranching activities on agricultural lands must be maintained in order to retain agricultural lands for future generations. Lands capable of supporting viable agricultural activities should be protected and kept in agriculture. Hydroelectric facilities can provide the State with alternative energy options, as long as it is secondary to agricultural activities on agricultural lands.

Thank you for this opportunity to provide testimony on this measure.



Email: communications@ulupono.com

SENATE COMMITTEES ON TRANSPORTATION & ENERGY AND WATER, LAND, &
AGRICULTURE

Tuesday, March 22, 2016 — 2:50 p.m. — Room 229

Ulupono Initiative Strongly Supports HB 2077 HD 2, Relating to Hydroelectric Power

Dear Chair Inouye, Chair Gabbard, Vice Chair Nishihara, and Members of the Committees:

My name is Kyle Datta and I am General Partner of the Ulupono Initiative, a Hawai'i-based impact investment firm that strives to improve the quality of life for the people of Hawai'i by working toward solutions that create more locally produced food; increase affordable, clean, renewable energy; and reduce waste. We believe that self-sufficiency is essential to our future prosperity and will help shape a future where economic progress and mission-focused impact can work hand in hand.

Ulupono strongly supports HB 2077 HD 2, which permits hydroelectric power facilities larger than 500kW on Agricultural District lands, because it aligns with our goal of increasing the production of clean, renewable energy in Hawai'i. Of particular interest to Ulupono is the ability to create run-of-river hydroelectric and pumped storage hydro projects. Energy storage projects are gaining more support as variable renewable energy is increasing. Yet, for all the battery technology developments, hydroelectric and pumped storage hydro are some of the most cost efficient and technologically proven energy storage systems in the world.

Through increasing the electric generating capacity cap, more projects can be built that benefits farmers and ranchers, the utility, and ratepayers. For farmers and ranchers, a hydroelectric power and pumped storage project can provide both a supplemental revenue source and more effective water capture and usage. For the utility, these projects can provide more firm, renewable generating capacity and greater grid effectiveness. For the ratepayer, these energy projects can lower the cost of energy use.

However, these hydroelectric projects can require larger economies of scale to make them economically viable. The current 500kW cap is too small to allow for hydroelectric infrastructure and pumped storage hydro to develop in a timely manner.

As Hawai'i's energy issues become more complex and challenging, we appreciate this committee's efforts to look at policies that support renewable energy production.

Investing in a Sustainable Hawai'i

Thank you for this opportunity to testify.

Respectfully,

Kyle Datta
General Partner



SENATE COMMITTEE ON TRANSPORTATION & ENERGY

Attn: Chair Lorraine R. Inouye & Vice-Chair Mike Gabbard

SENATE COMMITTEE ON WATER, LAND & AGRICULTURE

Attn: Chair Mike Gabbard & Vice-Chair Clarence K. Nishihara

TESTIMONY RE: HOUSE BILL 2077, HD2,
RELATING TO HYDROELECTRIC POWER
March 22, 2016, 2:50 p.m., Conference Room 229

Aloha Chairs Inouye and Gabbard, Vice-Chairs Gabbard and Nishihara, and Members of the Committees:

Earthjustice submits the following comments regarding House Bill 2077 HD2, along with a minor proposed amendment. Earthjustice has years of experience in Hawai'i in both water resources and clean energy. We recognize the potential value of hydropower to facilitate Hawai'i's clean energy goals, and also emphasize that any hydropower (re)development must comply with Hawai'i's public trust mandates and avoid repeating or perpetuating the mistakes of the past.

HB 2077 would allow a "small hydropower facility as defined by the United States Department of Energy." While this definition is not completely clear, it appears it may authorize projects up to 30 MW, which could remove any practical size limits on hydro projects in Hawai'i. As one condition, HD2 provides that the project "[s]hall, if over five hundred kilowatts in hydroelectric generating capacity, have the approval of the commission on water resource management, including a new instream flow standard established for the hydroelectric facility in question."

Earthjustice supports this condition and suggests one minor amendment of the last clause to: "including a new instream flow standard established for the ~~hydroelectric facility in question~~ affected streams." This amendment would eliminate potential confusion and inconsistency, since instream flow standards are established for streams, and not for specific projects. See Haw. Rev. Stat. § 174C-71.

Mahalo nui for the opportunity to testify, and please do not hesitate to contact us for further information.

Isaac H. Moriwake
Attorney
EARTHJUSTICE



Wai Maoli

HAWAI'I FRESH WATER INITIATIVE

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HawaiiCommunityFoundation.org

Fresh Water Council Members

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Monty Richards

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Barry Usagawa

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Liaison/Scientific Advisor to HCF

Testimony of the Hawai'i Fresh Water Council on

H.B. 2077, HD 2

Relating to Hydroelectric Power

**Senate Committees on Water, Land, and Agriculture and
Transportation and Energy**

Tuesday, March 22, 2016

2:50 P.M.

Conference Room 229

The Hawaii Fresh Water Council strongly supports H.B. 2077 HD 2, which permits small hydroelectric power generation as a permitted use on agricultural land. However, the Council believes the bill can be amended and improved.

The Hawaii Fresh Water Initiative was launched in 2013 and assembled our diverse Fresh Water Council to develop a forward-thinking and consensus-based strategy to increase water security for Hawaii. Our Council jointly and unanimously recommended key strategies and policies with an ultimate goal of creating 100 million gallons per day (mgd) in additional, reliable fresh water capacity by 2030. One of the key strategies to achieve this statewide water goal is to increase recharge and water efficiency by maintaining reservoir storage capacity and upgrading agricultural water systems throughout the Islands.

H.B. 2077 HD2 would allow agricultural landowners to develop small hydroelectric power generation systems and pumped storage systems while developing revenue streams that can help maintain and upgrade agricultural water system infrastructure. The Council believes that upgraded infrastructure will also help conserve water lost through leaks.

H.B. 2077 HD2 can be improved by removing the requirement that hydroelectric facilities on agricultural land "shall only wheel to non-contiguous sites that have bona fide agricultural activities." This requirement will limit the ability of this policy to create revenue to improve and upgrade our state's water infrastructure, and is not required for any other form of renewable energy generated on agricultural lands under the statute.

For these reasons, we strongly support H.B. 2077 HD2, and urge amendments that are consistent with empowering farmers and agricultural landowners, and urge passage.



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**Testimony of the
Hawai'i Community Foundation
on
H.B. 2077, HD 2
Relating to Hydroelectric Power
Senate Committees on Water, Land, and Agriculture and
Transportation and Energy
Tuesday, March 22, 2016
2:50 P.M.
Conference Room 229**

The Hawaii Community Foundation strongly supports H.B. 2077 HD 2, which permits small hydroelectric power generation as a permitted use on agricultural land. However, the Foundation believes the bill can be amended and improved.

The Hawaii Community Foundation (HCF) became concerned about long-term fresh water security issues in 2012, as research emerged from the University of Hawaii linking climate change and negative trends in Hawaii's fresh water supply. HCF assembled a blue ribbon panel of water stakeholders to provide collaborative solutions, and in concert with their recommendations launched the Hawaii Fresh Water Initiative in 2013. The Fresh Water Initiative has a goal of creating 100 million gallons per day in additional, reliable fresh water capacity by 2030.

HCF supports the findings of the Fresh Water Council and strongly supports the policy recommendations found in their "Blueprint for Action." One of the key recommendations from the Council is increase recharge and water efficiency by maintaining reservoir storage capacity and upgrading agricultural water systems throughout the Islands. H.B. 2077 HD 2 will help advance this important effort.

HCF strongly supports H.B. 2077 HD2 and urges passage along with amendments proposed by the Fresh Water Council, and we stand ready to assist in helping implement this important program and all elements of the Council's "Blueprint for Action."

**TESTIMONY BEFORE THE SENATE COMMITTEES ON
TRANSPORTATION AND ENERGY,
AND
WATER, LAND AND AGRICULTURE**

H.B. No. 2077, H.D. 2

Relating to Hydroelectric Power

Tues., March 22, 2016

2:50 pm

State Capitol, Conference Room 229

Kevin M. Katsura
Assistant Deputy General Counsel (Regulatory), Legal Department
Hawaiian Electric Company, Inc.

Chairs Inouye, Gabbard and Vice Chairs Gabbard, Nishihara, and Members of the Committees:

My name is Kevin Katsura and I am testifying on behalf of Hawaiian Electric Company and its subsidiary utilities Maui Electric Company and Hawai'i Electric Light Company in **opposition** to H.B. 2077, H.D. 2 in its present amended form.

This bill has been amended to allow a hydroelectric facility to wheel power to non-contiguous sites that have bona fide agricultural activities without first determining whether wheeling is feasible, fair, has definite benefits in Hawai'i, and is in the public interest. Retail wheeling is a complex process which raises many operational, regulatory, legal, and ratemaking issues.

Allowing hydropower producers to sell electricity directly to non-contiguous or separately located agribusiness end-users will likely require the use of utility-owned distribution infrastructure at the expense of non-wheeling customers. Such customers would likely have to assume the cost of current utility infrastructure to reach (wheel) non-contiguous Agribusinesses while also impeding the utilities' ability to pursue and

procure new renewable generation sources contributing to 100% renewable energy by 2045. The complications of a multiple party wheeling power purchase, billing, and metering arrangement would act as a detriment for hydropower development on agriculture lands and should be avoided. The Hawaiian Electric Companies suggest that the Committee consider the current purchase power model used by the utility, which ensures that ALL customers can benefit from lower cost energy. Utility power purchases from hydropower facilities are in the best interests for all parties and can more aptly benefit the public as well as achieve the State's RPS goals.

In Hawai'i, we now have the boldest energy goal in the nation: A 100% renewable energy portfolio standard by 2045. This requires the utilities to invest in diverse resources to protect the resiliency of the supply. Retail wheeling attacks that strategy by focusing on short-term costs and using the cheapest resource at the time, which may create an unbalanced set of resources. This increases the risk profile of the utilities which in turn will hurt our customers.

In addition, retail wheeling, as proposed, creates winners and losers between independent power producers – those who sell directly to a select group through wheeling vs. those currently with power purchase agreements with the utilities or currently negotiating power purchase agreements with the utility. This bill will make obtaining hydropower energy for grid distribution more difficult which could negatively impact the RPS goals for the utility.

Further, wheeling may result in the degradation of service reliability. The utility may not be a party to any wheeling contract and the utility could be unable to predict where the load will come on to the system and make sure that the transmission infrastructure is adequate. There is less ability for the utility to negotiate to change

operating requirements and project design to protect the system. The utilities need to be involved in setting operational reliability standards to assure system reliability.

We must address the State's energy future as a whole and not with techniques that sound reasonable as stand-alone concepts. Hawaii has the best chance of success when all stakeholders can participate in reasoned discussions. We believe the Hawaii Public Utilities Commission ("PUC") has the jurisdiction to do so. The PUC should be allowed to continue its investigation into whether intra-governmental wheeling is feasible, how it would impact all customers in Hawaii, whether it would fit into plans for the achievement of state energy policy goals and be in the public interest before legislation is passed to implement retail wheeling in any form.

Accordingly, the Hawaiian Electric Companies oppose H.B. 2077, H.D. 2 in its present form pertaining to wheeling.

Thank you for this opportunity to testify.